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*Stated Meeting, June 19.*

Present, twenty-four members.

Mr. DU PONCEAU, President, in the Chair.

The following donations were received:—

FOR THE LIBRARY.

Transactions of the Geological Society of London. Second series.

Vol. V. Part 2. 4to. London, 1840.—*From the Society.*

Proceedings of the Royal Astronomical Society. Vol. V. No. 5.

March 13, 1840.—*From the Society.*

Bulletin de la Société de Geographie. Deuxième Serie. Tom. xii.

8vo. Paris, 1839.—*From the Society.*

Physicorum Aristotelis Libri. Argumenta in singulos Libros, ex Optimis Græcorum Commentariis conversa jam recens adjeclimus. Catalogum verò Librorum in hoc Opere contentorum sequenti Pagellâ reperies. 8vo. Lugduni, 1554.—*From Mr. Penington.*

Lapis Philosophicus sive Commentarius in octo Libros Physicorum Aristot. in quo Arcana Physiologiæ examinantur. Auctore Joanne Caso, in Medicinâ Doctore Oxoniensi, &c. Accedit in Fine Ancilla Philosophiæ, seu Epitome in octo Libros Aristot. Physicorum, eodem Auctore, cum Indicibus Locupletissimis. 8vo. Francof. ad Mœnum. 1600.—*From the same.*

Fourth Annual Report on the Geological Survey of the State of Pennsylvania. By Henry D. Rogers, State Geologist. Read in the House of Representatives, Feb. 8, 1840. 8vo. Harrisburg, 1840.—*From Mr. Frederick Fraley.*

A Description of the Canals and Rail Roads of the United States, comprehending Notices of all the Works of Internal Improvement throughout the several States. By H. S. Tanner. 8vo. New York, 1840.—*From the Author.*

The American Traveller, or Guide through the United States: containing Brief Notices of the several States, Cities, principal Towns, Canals, and Rail Roads, &c., with Tables of Distances by Stage, Canal, and Steamboat Routes: the whole Alphabetically arranged, with direct reference to the accompanying Map of the Roads, Canals, and Railways of the United States. Sixth

Edition. By H. S. Tanner. 12mo. Philadelphia, 1840.—*From the Author.*

Sketch of the Geology of North America, being the Substance of a Memoir read before the Ashmolean Society, November 26, 1838. By Charles Daubeny, M. D., F. R. S., L. S., G. S., M. R. I. A., Member of the American Philosophical Society, &c. &c. 8vo. Oxford, 1839.—*From the Author.*

Fifth Geological Report to the Twenty-third General Assembly of Tennessee, made November, 1839. By G. Troost, M. D., Geologist to the State, &c. 8vo. Nashville, 1840.—*From the Author.*

Pamphlets. 1. Journal of a Voyage from Okkak, on the Coast of Labrador, to Ungana Bay, westward of Cape Chudleigh; undertaken to Explore the Coast, and Visit the Esquimaux in that Unknown Region. By Benjamin Kohlmeister and George Kmoch, Missionaries of the Church of the Unitas Fratrum or United Brethren. 8vo. London, 1814. 2. Authentische Relation von dem Anlass, Fortgang und Schlusse der am 1sten. und 2ten. Januarii, Anno 174 $\frac{1}{2}$ , im Germantown gehaltenen Versammlung einiger Arbeiter derer meisten Christlichen Religionen und vieler vor sich selbst Gott-dienenden CHRISTEN-menschen in Pennsylvania: aufgesetzt in Germantown am Abend des 2ten. obigen Monats. 4to. Philadelphia. 3. Defensive War, in a Just Cause, Sinless: a Sermon preached by the Rev. David Jones, A. M. 8vo. Philadelphia, 1775. 4. A Lecture on the Excellence of the Gospel of Christ, &c. By John Stanford, M. A. 12mo. New York, 1791. 5. Report of the Preliminary Survey of the Route of the Hudson and Delaware Rail Road. By James B. Sargent, Esq., Civil Engineer, &c. 8vo. Newburgh, 1836.—*From Mr. John Jordan, Jr.*

Twelve Views of Churches, Schools, and other Buildings, erected by the United Brethren in America, with Descriptions, History, &c. New York, 1836.—*From the same.*

Frank; or Dialogues between a Father and Son, on the Subjects of Agriculture, Husbandry, and Rural Affairs. By the Author of "The Yellow Shoestrings." Small 8vo. Philadelphia, 1840.—*From the Author.*

View of the Origin and Migrations of the Polynesian Nation; demonstrating their Ancient Discovery and Progressive Settlement of

the Continent of America. By John Dunmore Lang, D. D., &c. &c. 8vo. London, 1834.—*From the Author.*

Transportation and Colonization; or the Causes of the Comparative Failure of the Transportation System in the Australian Colonies: with Suggestions for Insuring its Future Efficiency in Subserviency to Extensive Colonization. By John Dunmore Lang, D.D., Principal of the Australian College, &c. 12mo. London, 1837.—*From the same.*

Annual Report of the Geologist of Maryland (Dr. J. T. Ducatel). 8vo. 1839.—*From the Author.*

On the Mutual Action of Permanent Magnets, considered chiefly in Reference to their best Relative Position in an Observatory. By the Rev. Humphrey Lloyd, A. M., Fellow of Trinity College, Professor of Natural Philosophy in the University of Dublin, &c. &c., Honorary Member of the American Philosophical Society. (Published in the Transactions of the Royal Irish Academy, Vol. XIX. Part I.) 4to. Dublin, 1840.—*From the Author.*

A Discourse pronounced at Barnstable on the 3d of September, 1839, at the Celebration of the Second Centennial Anniversary of the Settlement of Cape Cod. By John Gorham Palfrey. 8vo. Boston, 1840.—*From the Author.*

The Study of the Celtic Languages. (From the New York Review for April, 1840.) By A. B. Chapin, M. A., Mem. Conn. Acad. Arts and Sciences, and Rector of St. James' Church, New Haven. 8vo. New York, 1840.—*From the Author.*

The Twenty-fourth Report of the Directors of the American Asylum at Hartford, for the Education and Instruction of the Deaf and Dumb. Exhibited to the Asylum, May 16, 1840. 8vo. Hartford, 1840.—*From Mr. Lewis Weld.*

Researches on the Gale and Hurricane in the Bay of Bengal on the 3d, 4th, and 5th of June, 1839. By Henry Peddington. (From the Journal of the Asiatic Society.) 8vo. Calcutta, 1839.—*From Dr. Harlan.*

The Bhāgvat-gēetā, or Dialogues of Kr̄eṣhnā and Arjōḍn, in eighteen Lectures; with Notes. Translated from the Original in the Sānskrēt, or Ancient Language of the Brāhmāns. By Charles Wilkins, Senior Merchant in the Service of the Honourable East India Company, &c. 4to. London, 1785.—*From Mr. Vaughan.*

Memorials of Columbus: or a Collection of Authentic Documents of that Celebrated Navigator, now first published from the Original

Manuscripts, by Order of the Decurions of Genoa; preceded by a Memoir of his Life and Discoveries. Translated from the Spanish and Italian. 8vo. London, 1823.—*From the same.*

Necessity of Popular Education as a National Object; with Hints on the Treatment of Criminals, and Observations on Homicidal Insanity. By James Simpson. 12mo. New York, 1834.—*From the same.*

A Biographical Memoir of the late Commodore Joshua Barney, from Autographical Notes and Journals in Possession of his Family, and other Authentic Sources. Edited by Mary Barney. 8vo. Boston, 1832.—*From the same.*

The Universal Cambist and Commercial Instructor: being a Full and Accurate Treatise on the Exchanges, Moneys, Weights, and Measures of all Trading Nations and their Colonies; with an Account of their Banks, Public Funds, and Paper Currencies. By P. Kelly, LL.D., Master of the Finsbury Square Academy, London, &c. &c. 2 Vols. 4to. The Second Edition, including a Revision of Foreign Weights and Measures, from an Actual Comparison of their Standards, by the Order and Aid of the British Government. London, 1821.—*From the same.*

Description de l'Égypte, contenant plusieurs Remarques Curieuses sur la Géographie Ancienne et Moderne de ce País, sur ses Monumens Anciens, sur les Mœurs, les Coutumes, et la Religion des Habitans, sur le Gouvernement et le Commerce, sur les Animaux, les Arbres, les Plantes, &c. Composée sur les Mémoires de M. de Maillet, Ancien Consul de Francé au Caire, par M. l'Abbé le Maserier. Ouvrage enrichi de Cartes et de Figures. 4to. Paris, 1735.—*From Mr. Du Ponceau.*

Indian Biography, containing the Lives of more than Two Hundred Indian Chiefs; also such others of that Race as have rendered their Names conspicuous in the History of North America, from its first being known to Europeans, to the present Period; giving, at large, their most Celebrated Speeches, Memorable Sayings, Numerous Anecdotes, and a History of their Wars; much of which is taken from Manuscripts never before published. By Samuel G. Drake. 12mo. Boston, 1832.—*From the same.*

An Original Letter of William Smith, Secretary of the American Philosophical Society, before its Union with the Junto in 1769, to Governor Hamilton, October 18, 1768, relative to the Transit of Venus.—*From the same.*

A Discourse on the Life and Character of the Reverend John Thornton Kirkland, D. D., LL.D., formerly Pastor of the Church on Church Green, Boston, and late President of Harvard University; delivered in the Church on Church Green, May 3, 1840. By Alexander Young. 8vo. Boston, 1840.—*From the Author.*

Two Reports on the Coal Lands, Mines, and Improvements of the Dauphin and Susquehanna Coal Company, and of the Geological Examinations, Present Condition, and Prospects of the Stony Creek Coal Estate, in the Townships of Jackson, Rush, and Middle Paxtang, in the County of Dauphin, and of East Hanover Township, in the County of Lebanon, Pennsylvania: with an Appendix, containing numerous Tables and Statistical Information, and various Maps, Sections, and Diagrams, chiefly in Illustration of Coal and Iron. Addressed to the Board of Directors of the Dauphin and Susquehanna Coal Company, &c. &c. By Richard C. Taylor, President of the Board of Directors. 8vo. Philadelphia, 1840.—*From the Author.*

Index Monasticus; or the Abbeys and other Monasteries, Alien Priories, Friaries, Colleges, Collegiate Churches, and Hospitals, with their Dependencies, formerly established in the Diocese of Norwich and the Ancient Kingdom of East Anglia; systematically arranged and briefly described, according to the respective Orders and Denominations in each County, and Illustrated by Maps of Suffolk, Norfolk, and the City of Norwich, and the Arms of Religious Houses. By Richard Taylor, of Norwich. Folio. London, 1821.—*From the same.*

On the Geology of East Norfolk: with Remarks upon the Hypothesis of Mr. J. W. Robberds, respecting the former Level of the German Ocean. By Richard C. Taylor, F. G. S., Author of the Index Monasticus. 8vo. London, 1827.—*From the same.*

Pamphlets. 1. Notes respecting Certain Indian Mounds and Earthworks, in the Form of Animal Effigies, chiefly in the Wisconsin Territory, U. S. By Richard C. Taylor, Esq. 2. Sundry Communications.—*a.* The Natural History of the Alleghany Mountains. *b.* The American Fucoides. *c.* The Natural History of Cuba. *d.* The History and Progress of Geology. *e.* Reviews of Martin's Geological Memoir, and of Professor Buckland on the Formation of the Valley of Kingsclerc, &c. *f.* Introduction to Geology. *g.* Antediluvian Zoology and Botany. *h.* Illustrations of Antediluvian Zoology. *i.* Geological Arrangement of

Fossil Shells. *j.* On part of the Mineral Basin of South Wales. By R. C. Taylor.—*From the same.*

The American Medical Library and Intelligencer for May 15, and June 1, 1840. Vol. IV. Nos. 4 and 5.—*From the Editor, Dr. Dunglison.*

Pamphlets. 1. Notice of the Daguerreotype. By William E. A. Aikin, M. D., Professor of Chemistry and Pharmacy in the University of Maryland. 8vo. Baltimore, 1840. 2. Report of a Committee of the Medical Society of the State of New York, on the Subject of Medical Education. 8vo. Albany, 1840. 3. Philosophy of Mind, developing New Sources of Ideas, designating their Distinctive Classes, and Simplifying the Faculties and Operations of the whole Mind. By John Stearns, M. D., of the City of New York, late President of the Medical Society of the State. 8vo. New York, 1840. 4. A Letter to William E. Channing, D. D., in Reply to one addressed to him by R. R. Madden, on the Abuse of the Flag of the United States in the Island of Cuba, for Promoting the Slave Trade. By a Calm Observer. 8vo. Boston, 1840. 5. An Account of the Visit of the French Frigate L'Artemise to the Sandwich Islands, July, 1839. 8vo. Honolulu, 1839.—*From the same.*

Sundry Engravings. 1. James Madison. 2. Governor Strong. 3. Robert Morris. 4. Charles Dickens. 5. Rev. John Fletcher. 6. A Lady from Franca. 7. J. Rusling. 8. Rev. C. Wesley, by T. B. Welch. *From Mr. Welch.*

Report of the Select Committee of the House of Representatives of the United States (J. Q. Adams, Chairman), on the Smithsonian Bequest, March 5, 1840.—*From Mr. Sergeant.*

Memoir, Historical and Political, on the North-west Coast of America, and the adjacent Territories: Illustrated by a Map, and a Geographical View of those Countries. By Robert Greenhow, Translator and Librarian to the Department of State. (Submitted by Mr. Linn to the Senate of the United States.) 4to. Washington, 1840.—*From the same.*

The Prospects of Art in the United States: an Address before the Artists' Fund Society of Philadelphia, at the Opening of their Exhibition, May, 1840. By George W. Bethune. (By request.) 8vo. Philadelphia, 1840.—*From the Society.*

The History of the Royal Society of London, for the Improving of

Natural Knowledge. By Thomas Sprat. 4to. London, 1667.—  
*From Dr. Hare.*

Trois Planches d'Ammonites, par Léopold de Buch. Folio.—*From the Author.*

Observations of the Magnetic Intensity at Twenty-one Stations in Europe. By A. D. Bache, LL.D., President of the Girard College for Orphans, one of the Secretaries of the American Philosophical Society, &c. (From Vol. VII. of the Transactions of the Society.) 4to.—*From the Author.*

Boletin Enciclopedico de la Sociedad Economica de Amigos del País, &c. &c. &c. Número 1. Enero, 1840. 8vo. Valencia, 1840.—  
*From the Society.*

A Discourse on the Death of General Washington, late President of the United States; delivered on the 22d of February, 1800, in the Church in Williamsburg. By James Madison, D. D., Bishop of the Protestant Episcopal Church in Virginia, and President of William and Mary College. Third Edition, with Additions. 8vo. Philadelphia, 1831.—*From Col. Hugh Mercer, of Fredericksburg.*

Sundry Biographical Notices of Brigadier General H. Mercer, and Accounts of the Battle of Trenton.—*From the same.*

#### FOR THE CABINET.

Several Stones, worked by the Indians with Stone Hammers, found in an Indian workshop, five miles from Paradise, near Lancaster, Pennsylvania.—*From Mr. Redmond Conyngham.*

The Committee, consisting of Mr. Taylor, Mr. Booth, and Dr. Hays, to whom was referred a Communication, entitled “Notice of the Oolitic Formation in America, with Descriptions of some of its Organic Remains, by Isaac Lea,” reported in favour of publication, which was ordered accordingly.

In this paper Mr. Lea describes a number of fossils from New Granada and Cuba, which he considers to belong properly to the forms resembling those well known to exist in the Oolites (Jura formation) of Europe. In a note Mr. Lea mentions, that after his paper was written, the work of the distinguished geologist, Von Buch, was received by him from the author. In this work, Von Buch describes and figures some of the fossils from the same formation in New Granada, taken by Humboldt nearly forty years since to Europe,

which that learned traveller, in his "Essay on the Superposition of Rocks," considered to belong to the Jura Formation. Von Buch takes a different view, and places them higher up in the series; that is, in the Chalk Formation. After a careful perusal of Von Buch's work, and a re-examination of the specimens, Mr. Lea still holds to his previous opinion, that these forms belong properly to the Oolitic series, and not to the Chalk. He is the more confirmed in this opinion from having since been enabled to examine Captain Grant's Memoir on the Geology of Cutch, recently published in the Geological Society's Transactions of London, Second Series, Vol. V. Part 2; where the forms represented have a strong alliance to those described by Mr. Lea. Captain Grant states, that the mineralogical character of the rock "greatly resembles the English Lias; but its fossils have been found, after a careful examination by Mr. James Sowerby, to assimilate very closely to those of the Oolitic beds," &c.

Mr. Lea's paper contains descriptions of the following species:—

*Orthocera Humboldtiana.* Testâ rectâ, elongato-conicâ, subcylindraceâ; articulis transversis, subdistantibus.

*Ammonites Tocaimaensis.* Testâ orbiculari; anfractibus planulatis, transversim costulatis; costis planulatis; periphæriâ minutè sulcatâ.

*Ammonites Occidentalis.* Testâ orbiculari, utrinque umbilicatâ; anfractibus rotundatis, transversim costulatis; periphæriâ rotundâ, sulco circulari destitutâ.

*Ammonites Gibboniana.* Testâ orbiculari; anfractibus compres- sis; costis elevatis, carinatis, remotiusculis ad periphæriam.

*Ammonites Vanuxemensis.* Testâ orbiculari, utrinque umbili- catâ; anfractibus convexo-cylindraceis, transversim crebrissimèque costulatis; periphæriâ rotundâ, sulco circulari destitutâ.

*Ammonites Americana.* Testâ orbiculari; anfractibus subplanis, obliquè costulatis; periphæriâ sulcatâ.

*Trigonia Gibboniana.* Testâ ovato-trigonâ, multicostatâ; costis transversis, subtuberculato-asperis; areâ posticâ carinatâ.

*Trigonia Tocaimana.* Testâ trigonâ, posticè productâ inflatâ; costis transversis lœvibus.

*Trigonia Hondaana.* Testâ ovato-trigonâ, inflatâ, multicostatâ; costis transversis, tuberculato-nodosis; areâ posticâ elevatâ, crebris simèque nodosâ.

*Natica Gibboniana.* Testâ ovatâ, ventricosâ; spirâ productius- culâ; anfractibus quinis, subplanulatis; aperturâ contractâ, elongatâ.

*Spatangus Colombianus.* Sp. ovato-cordatus, gibbus, convexus, anticè planulato; ambulacris quinis, lanceolatis, transversim punctatis.

*Terebratula Tayloriana.* Testâ triangulare, sulcis longitudinalibus impressis; valvâ inferiore in superiore reflexâ; margine bipli- cato.

*Terebratula Poeiana.* Testâ elongato-ovatâ, lâvi, inflatâ; nate productâ, incurva; foramine submagno.

*Tellina [?] Humboldtiana.* Testâ scaleniâ, inflatâ, anticè truncatâ; striis transversis, elevatis, remotiusculis, rotundatis.

The Committee, consisting of Dr. Patterson, Prof. Bache, and Mr. Walker, to whom was referred a paper, entitled, "On the Insufficiency of Taylor's Theorem as commonly investigated, with Objections to the Demonstrations of Poisson and Cauchy, and the assumed Generalization of Mr. Peacock; to which is added, a New Investigation and Remarks on the Development and Continuity of Functions, by Charles Bonnycastle, Professor of Mathematics in the University of Virginia," reported in favour of its publication in the Transactions of the Society, which was ordered accordingly.

The paper of Professor Bonnycastle is composed of three sections. In the first, which is on the "Development of Functions," he points out and discusses what he considers to be "the errors and conflicting views resulting from the vague manner in which mathematical writers have usually conceived the ultimate object of their peculiar logic." The second section is on the "Continuity of Functions," and the division of this continuity into classes; a subject heretofore touched upon only incidentally by other writers. The principal object of the paper is presented in the third section, which treats of "Functions considered in the order of their magnitude," and particularly of "Taylor's Theorem;" and the author discusses this subject with the care demanded by a theorem which forms the basis of the differential and integral calculus, and which acts so important a part in all the higher mathematics.

Mr. Walker, from the Committee on making and collecting observations of Celestial Phenomena, reported, in part, that they had received observations of Lunar Occultations of the Fixed Stars, which are given in the mean time of the respec-

tive places of observation, being a continuation of the list published in No. 6, pages 71 and 72, of the Society's Proceedings; and, on motion, the Report was accepted.

1838.

		<i>h m s</i>	
48.	Nov. 13, $\alpha$ Virginis,	Im. 19 31 8.55 d. l. Hudson Obs'y.	Loomis.
49.	Dec. 25, 57 Mayer,	Im. 7 7 48.95 d. l. Breslaw	Boguslawski.
50.	" 102 $\pi$ Piscium,	Im. 7 22 46.22 d. l.	"
51.*	" "	Em. 7 34 37.10 b. l.	"
52.	26, 27 $\downarrow$ Arietis,	Im. 6 15 46.34 d. l.	"
53.*	" "	Em. 7 23 24.12 b. l.	"
54.	" "	Im. 5 31 35.90 d. l. Elberfeldt,	Hulsmann.
55.	" "	Im. 6 27 50.28 d. l. Cracow Obs'y.	Weisse.
56.	27, $\pi$ Pleiadum,	Im. 7 29 19.80 d. l.	"
57.	" $f$ "	Im. 8 13 3.00 d. l.	"
58.	" "	Im. 16 25 37.94 d. l. Breslaw Obs.	Boguslawski.
59.	" "	Im. 7 29 19.80 d. l. Dover,	Blickensderfer.
60.	" $f$ "	Im. 8 15 3.00 d. l.	"

1839.

61.	Jan. 10, $\pi$ Virginis,	Im. 18 19 19.00 d. l. Southwick,	Holcomb.
62.	" "	Em. 18 34 15.00 d. l.	"
63.	21, $\pi$ Piscium,	Im. 6 18 58.44 d. l. Philad. Obs'y.	W. and K.
64.	" "	Im. 6 31 44.00 d. l. Southwick,	H.
65.	April 19, $c$ Geminorum,	Im. 7 17 35.38 d. l. Hudson Obs'y.	L.
66.*	" "	Em. 8 25 35.42 b. l.	"
67.	" "	Im. 7 55 51.65 d. l. Philad. Obs'y.	W. and K.
68.	" "	Im. 7 58 46.10 d. l. Princeton, N. J.	A.
69.*	" "	Em. 8 57 43.20 b. l.	"
70.	" "	Im. 8 9 42.90 d. l. Southwick,	H.
71.	" "	Im. 8 20 31.90 d. l. Dorchester,	Bond.
72.	" "	Im. 8 20 31.70 d. l.	"
73.	" "	Im. 8 20 33.96 d. l. Boston,	Paine.
74.	20, $\gamma$ Canceris	Im. 10 6 3.13 d. l. Hudson Obs'y.	L.
75.*	" "	Em. 10 53 51.08 b. l.	"
76.	" "	Im. 10 44 24.80 d. l. Dorchester,	B.
77.	" "	Im. 10 44 24.70 d. l.	"
78.	" "	Im. 10 44 21.70 d. l. Boston,	P.
79.	25, 91 Virginis,	Im. 8 13 47.20 d. l. Philad. Obs'y.	W. P. & K.
80.	" 50 Virginis,	Im. 8 25 59.50 d. l.	"
81.	June 20, 68 $i$ Virginis,	Im. 7 46 28.80 d. l. Washington,	Gilliss.
82.	" "	Im. 7 57 42.88 d. l. Philad. Obs'y.	W. and K.
83.	" "	Im. 8 11 57.25 d. l. Southwick,	H.
84.	June 23, $b$ Scorpii	Im. 8 39 53.90 d. l. Washington,	G.
85.	" "	Im. 8 50 52.07 d. l. Philad. Obs'y.	W. and K.
86.	30, $D$ Aquarii	Im. 10 58 50.54 d. l.	"
87.	July 6, $b$ Pleiadum,	Im. 15 29 49.49 b. l.	W.
88.*	" "	Im. 15 29 43.49 b. l.	R.
89.	" "	Em. 16 24 6.99 d. l.	"

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1839.					
90.	July 6, <i>b</i> Pleiadum,	Em. 16	14	7.10	d. l. Washington,
91.*	, Anony. 7th mag.	Im.	15	55	4.49 b. l. Philad. Obs'y.
92.*	,    "    "    "	Im.	15	55	4.07 b. l.    "
93.	, <i>d</i> "    "	Im.	16	0	21.49 b. l.    "
94.	,    "    "    "	Im.	16	0	18.69 b. l.    "
95.	,    "    "    "	Im.	15	32	34.56 b. l. Hudson Obs'y.
96.	,    "    "    "	Em.	16	22	28.85 b. l.    "
97.	, <i>c</i> "    "	Im.	16	14	45.29 b. l. Philad. Obs'y.
98.	,    "    "    "	Im.	16	14	44.29 b. l.    "
99.	,    "    "    "	Im.	16	5	49.10 b. l. Washington,
100.	,    "    "    "	Em.	16	33	41.10 d. l.    "
101. {	,    "    "    "	Im.	16	30	24.79 } b. l. Philad. Obs'y.
	,    "    "    "	Im.	16	30	26.49 } b. l.    "
102. {	,    "    "    "	Im.	16	30	24.49 } b. l.    "
	,    "    "    "	Im.	16	30	25.79 } b. l.    "
103.	,    "    "    "	Im.	16	20	17.40 b. l. Washington,
104. July 14, 59	<i>c</i> Leonis,	Im.	8	2	44.25 d. l. Philad. Obs'y.
105. Sep. 14,	<i>τ</i> Scorpii,	Im.	6	19	51.92 d. l.    "
106.	,    "    "    "	Im.	6	19	51.72 d. l.    "
107.	,    "    "    "	Em.	7	47	5.84 b. l.    "
108.	,    "    "    "	Im.	6	42	13.71 d. l. Dorchester,
109.	20, 42 Aquarii,	Im.	12	24	39.75 d. l. Philad. Obs'y.
110.	,    "    "    "	Im.	12	24	40.15 d. l.    "
111.	,    "    "    "	Im.	12	45	12.40 d. l. Boston,
112.	26, <i>b</i> Pleiadum,	Im.	9	41	49.68 b. l. Philad. Obs'y.
113.	,    "    "    "	Im.	9	41	49.18 b. l.    "
114.	,    "    "    "	Em.	10	32	4.73 d. l.    "
115.	,    "    "    "	Em.	10	32	7.97 d. l.    "
116.	,    "    "    "	Em.	10	32	5.78 d. l.    "
117.	,    "    "    "	Em.	10	32	5.13 d. l.    "
118.	,    "    "    "	Im.	9	54	6.00 b. l. Southwick,
119.	,    "    "    "	Em.	10	53	6.90 d. l. Boston,
120.	,    "    "    "	Em.	10	22	52.60 d. l. Washington,
121.	, <i>g</i> "    "	Im.	9	45	5.88 b. l. Philad. Obs'y.
122.	,    "    "    "	Em.	10	39	57.09 d. l.    "
123.	,    "    "    "	Em.	10	39	57.67 d. l.    "
124.	,    "    "    "	Em.	10	39	58.95 d. l.    "
125.	,    "    "    "	Em.	10	39	57.04 d. l.    "
126.	,    "    "    "	Em.	11	1	45.27 d. l. Boston,
127.	,    "    "    "	Em.	10	30	20.20 d. l. Washington,
128.*	, <i>e</i> "    "	Im.	10	6	37.75 b. l. Philad. Obs'y.
129.	,    "    "    "	Im.	10	6	39.61 b. l.    "
130.	,    "    "    "	Im.	10	6	42.35 b. l.    "
131.	,    "    "    "	Em.	10	49	58.93 d. l.    "
132.	,    "    "    "	Em.	10	49	59.52 d. l.    "
133.	,    "    "    "	Em.	10	50	0.36 d. l.    "
134.	,    "    "    "	Em.	10	49	59.33 d. l.    "

	1839	<i>h</i>	<i>m</i>	<i>s</i>		
135. Sep. 26,	<i>c</i> Pleiadum,	Em. 11	12	36.43	d. l. Boston,	
136.	" "	Im.	9	57	40.60 b. l. Washington,	
137.	" "	Em.	10	39	59.40 d. l. "	
138.*	" "	Im.	17	58	17.77 b. l. Breslaw Obs'y.	
139.	<i>c</i> "	Im.	10	9	11.23 b. l. Philad. Obs'y.	
140.	" "	Im.	10	9	11.83 b. l. "	
141.*	" "	Im.	10	9	7.40 b. l. "	
142.	" "	Em.	11	6	34.69 d. l. "	
143.	" "	Em.	11	6	35.04 d. l. "	
144.	" "	Em.	11	6	35.29 d. l. "	
145.	" "	Im.	10	22	2.00 b. l. Southwick,	
146.	" "	Em.	11	28	58.98 d. l. Boston,	
147.	" "	Im.	9	59	56.20 b. l. Washington,	
148.	" "	Em.	10	56	42.40 d. l. "	
149.*	" "	Im.	18	23	53.51 b. l. Breslaw Obs. Boguslawski.	
150.*	" 66	Arietis,	Im.	9	55	48.14 b. l. "
151.*	" "		Im.	9	55	56.85 b. l. "
152.	" "	Em.	10	8	36.22 d. l. "	
153.	" "	Im.	9	22	21.03 b. l. Hamburg Obs'y. Rumker.	
154.*	" "	Em.	9	54	22.77 d. l. "	
155. Oct. 14,	<i>τ</i> Sagittarii,	Im.	8	21	56.26 d. l. Roscoe, O. Blickensderfer.	
156.	17, <i>δ</i> Capricorni,	Im.	8	28	11.50 d. l. Philad. Obs'y.	
157.*	" "	Im.	8	40	10.52 d. l. New Haven,	
158.*	" "	Em.	9	32	1.04 b. l. "	
159.	" "	Im.	8	18	19.10 d. l. Washington,	
160.	<i>γ</i> Capricorni,	Im.	12	11	46.80 d. l. Breslaw,	
161.	18, 58 Aquarii,	Im.	12	5	44.71 d. l. "	
162.	28, <i>γ</i> Cancer,	Im.	14	8	30.10 d. l. Washington,	
163. Dec. 12,	<i>λ</i> Aquarii,	Im.	9	22	24.02 b. l. Philad. Obs'y.	
164.	" "	Im.	9	22	24.45 b. l. "	
165.	" "	Im.	8	25	48.24 b. l. New Haven,	
166.	" "	Im.	8	25	48.39 b. l. "	
167.	" "	Em.	9	31	57.88 d. l. "	
168.	" "	Em.	9	31	57.78 d. l. "	
169.	" 78	"	Im.	9	33	36.20 d. l. Philad. Obs'y.
170.	" "	Im.	9	33	38.45 d. l. "	
171.	" "	Im.	9	43	26.84 d. l. New Haven,	
172.	" "	Im.	9	43	26.89 d. l. "	
173. July 6,	<i>b</i> Pleiadum,	Em.	15	56	22.65 d. l. Hudson Obs'y.	
174.	" "	Im.	16	2	21.67 b. l. "	

The longitudes and latitudes of the American places of observation, as far as they can be determined from a reduction of these and former American observations, have been furnished by Messrs. Walker and Kendall, as follows:

Place of Observation.	N. Latitude.	Longitude from Philad. Obs'y.			Longitude west from Greenwich.					
		°	'	"	m	s	h	m	s	
Boston State House	- - -	42	21	22.7	E.	16	24.77	4	44	17.13
", Paine's House	- - -	42	20	56	E.	16	25.10	4	44	16.80
Dorchester, Bond's private Obs.	- - -	42	19	15	E.	16	24.09	4	44	17.81
Southwick, Holcomb's	- - -	42	0	41	E.	9	24.83	4	51	17.07
Yale College, New Haven	- - -	41	17	58	E.	8	51.00	4	51	50.90
City Hall, New York	- - -	40	42	40	E.	4	37.54	4	56	4.36
Brooklyn, Blunt's private Obs'y	- - -	40	42	0	E.	4	41.90	4	56	0.00
Nassau Hall, Princeton College	- - -	40	20	50	E.	2	3.70	4	58	38.20
Alexander's House	- - -	40	20	56	E.	2	4.00	4	58	37.90
Philadelphia High School Obs'y	- - -	39	57	8		0.		5	0	41.90
", State House	- - -	39	56	57.9	E.	2.86		5	0	39.04
Washington, Capitol	- - -	38	53	23	W.	7	24.10	5	8	6.00
", Marine Obs'y	- - -	38	53	31	W.	7	24.18	5	8	6.08
Hudson Observatory	- - -	41	14	37	W.	25	5.56	5	25	47.46
Dover, Ohio	- - -	40	30	52	W.	25	14.02	5	25	55.92

The details of the computations on which these results are based, are too extensive for the limits of this Report. The separate results for the longitude of the Capitol, on account of its importance as being our prime meridian, are here appended.

No.	Date.	Object Observed.	Compared with	Relative Weight.	Resulting Lon. from Greenwich.
1	1791. April 3	Annular Eclipse	Corr. Obs. European Observatories	-	5 8 5.38
2	1793. Jan. 21	Oc'e'n. $\alpha$ Tauri	Merid. , ,	-	5 7 53.08
3	1804. Oct. 20	" " Solar Eclipse	" Salem, Massachusetts	-	5 8 6.88
4	1811. Sept. 17	Occ'n. $\gamma$ Tauri	Corr. European Observatory	-	8.78
5	1813. Jan. 12	Occ'n. $\gamma$ Tauri	" Dorchester Observatory	-	27.48
6	1831. Feb. 12	Solar Eclipse	" European Observatory	-	7.82
7	1836. May 15	Annular Eclipse	" European Observatory	-	13.64
8	1838. Sept. 18	Im. 68 $\circ$ Virginis	" Philadelphia, Princeton, Southwick and Brooklyn	3.	2.97
9	1839. June 20	Im. 1 $\delta$ Scorpii	" Philadelphia Obs'y.	-	6.68
10	" June 23	"	"	-	12.99
11	July 6	Em. $\delta$ Pleiadum	" and Hudson Obs'y.	1.5	4.84
12	"	Im. $\epsilon$	"	0.3	11.66
13	"	Im. $\eta$	"	1.5	6.10
14	Sept. 26	Em. $\beta$	" and Boston	-	1.38
15	"	Em. $\zeta$	" and Southwick & Breslaw Obs.	0.6	9.87
16	"	Em. $\eta$	" and Boston	-	4.00
17	"	Em. $\delta$	"	1.5	5.86
18	" Oct. 17	Em. $\epsilon$	"	1.5	6.71
19	"	Im. $\delta$ Capricorni	"	1.0	5.02
20	1840. April 19	Im. $\tau$ Scorpii	"	0.7	3.10
21	" May 16	Em. $\eta$	"	0.7	4.97
		Em. $\mu$ Cancri	"	0.7	8.47
		Im. $\mu$ Cancri	"	1.0	
					23.9 138.07

Marine Obs. Mean of 21 results according to weights  
 Capitol - Mean of 6 results by transport'n of chron's, by R. T. Paine, between Washington, Phila. and Boston  
 Marine Obs. Mean of 6 results by transport'n of chron's, by R. T. Paine, between Washington, Phila. and Boston  
 Whence longitude of the Capitol - - - - -

## NOTE BY THE COMMITTEE.

The observations at the Hudson Observatory are made by	Prof. E. Loomis.
",    ", Washington Marine Obs'y.	Lieut. S. M. Gilliss.
",    ", Boston,	R. T. Paine, Esq.
",    ", Dorchester Obs'y.	Wm. Cranch Bond
",    ", Southwick Mass.	Mr. A. Holcomb.
",    ", Princeton,	Prof. S. Alexander.
",    ", Dover, Ohio,	Mr. J. Blickensderfer, jr.
",    ", Brooklyn Obs'y.	Mr. E. Blunt.
",    ", New Haven,	Mr. E. P. Mason and Mr. Bradley.
",    ", Philadelphia Obs'y.	W is for Mr. S. C. Walker.
",    ", "	K     "     Prof. E. O. Kendall.
",    ", "	R     "     Wm. H. C. Riggs.
",    ", "	M     "     Mr. E. P. Mason
",    ", "	P     "     R. T. Paine, Esq.

The numbers which have an asterisk (\*) prefixed to them are considered by the observers as somewhat doubtful, from brightness of the moon's limb or other causes. The European observations have been selected from those published in Schumacher's Astronomische Nachrichten, on account of their coincidence in date with the American observations. The immersion and emersion of  $\alpha$  Piscium, January 10th, 1839, took place both at the moon's dark limb. At the immersion of  $\alpha$  Pleiadum, July 6th, 1839, the star appeared to hang on the moon's bright limb about 1.7s; or rather, the star appeared to have a sensible disc taking that time to immerge.

Professor Henry presented a communication, entitled "Contributions to Electricity and Magnetism, Fourth Series.—On Electro-dynamic Induction, Magnetic Distribution, &c.,—by Joseph Henry, Professor of Natural Philosophy, College of New Jersey, Princeton;" and accompanied the presentation of the same with sundry verbal and graphic illustrations.

The communication was referred to a committee.

Mr. Du Ponceau presented a communication, entitled "An Historical Account of the Origin and Formation of the American Philosophical Society, held at Philadelphia, for promoting Useful Knowledge;" when, in consequence of the lateness of the hour and the amount of unfinished business, it was resolved, that the Society do adjourn to meet again on Friday evening next, and that due notice thereof be given in the public papers by the Librarian.